Production and collective behavior of strange particles in Au+Au collisions at 2-8 AGeV

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Abstract

The production and properties of strange particles can provide an important probe of the hot and dense nuclear matter produced in energetic heavy ion collisions. They can give insight into the fundamental aspects of chiral symmetry restoration at high baryon density and/or temperature as well as information relevant to the amount of strangeness bearing matter in the interior of neutron stars. The E895 collaboration has made extensive measurements of the production and flow of lambdas and neutral kaons at the AGS. Results from these measurements will be presented and compared to those for non-strange particles. Particular emphasis will be placed on the utility of kaon and lambda flow as a probe for the kaon-nucleon and the lambda-nucleon potentials.